Review of Duke Energy Progress, LLC Application for Approval of Rider 13 Docket Number 2021-243-E

South Carolina
Office of Regulatory Staff

October 15, 2021

EXECUTIVE SUMMARY

In Duke Energy Progress, LLC's ("DEP" or "Company") Application for Approval of Rider Demand Side Management ("DSM") and Energy Efficiency ("EE")-13 ("Rider 13" or "Rider") ("Application"), the Company is seeking recovery of $37,477,937 with $19,613,910 (or 52%) attributed to residential customers and $17,864,027 (or 48%) attributed to general service customers to cover the revenue requirements of Rider 13. This report details the South Carolina Office of Regulatory Staff's ("ORS") findings and recommendations based on its review of the Company's Application, programs, and cost recovery mechanism. Based on its review, ORS finds that the updated Rider 13 was developed in accordance with the terms and conditions set forth by the Public Service Commission of South Carolina ("Commission") in Docket Nos. 2008-251-E and 2015-163-E and is based on reasonable estimates of participation in the Company's programs.

ORS finds that overall, the Company's programs are performing well and achieving higher than forecasted savings. The Company's portfolio, excluding the impact of the Distribution System Demand Response ("DSDR") Program, achieved 97% of forecasted 2020 energy savings and exceeded the forecasted peak demand reduction by 6% in 2020. The DSDR Program provided an additional system energy savings of 32,097,809 kilowatt-hours ("kWh") and peak demand savings of 205,053 kilowatts ("kW") in 2020. However, one of the Company's programs, the EnergyWise for Business program, is not currently cost-effective, that is, the projected costs exceed the projected savings for this program. ORS recommends that the company continue to incorporate the necessary changes to improve the program's cost effectiveness.

The current Rider 12 rates approved for 2021 and the Rider 13 rates proposed for 2022 are shown in Table 1 below.

Table 1: Comparison of Current and Requested Rates

DSM/EE Rider	Approved Rider 12 Rate (¢/kWh)	Requested Rider 13 Rate (¢/kWh)	Change to Rider 12 Rate (¢/kWh)
Residential	0.647	0.829	0.182
Non-Residential	1.007	1.127	0.120

If Rider 13 is approved, the monthly bill of an average residential customer using 1,000 kWh per month will increase by approximately $1.82.

Exhibit 1 (attached) details the development of the requested rates.

BACKGROUND AND INTRODUCTION

The Company's South Carolina DSM/EE mechanism was established in the stipulation filed on January 23, 2009 in Docket No. 2008-251-E ("Stipulation") and approved by Commission Order No. 2009-373, dated June 26, 2009. Tariffs for the initial set of DSM/EE programs covered under this mechanism were filed in Docket No. 2009-190-E on May 11, 2009, with the initial proposed cost recovery application filing following in Docket No. 2009-191-E on the same date. The Company's initial cost recovery application covered nine (9) DSM and EE programs, with six (6) programs targeting residential customers, two (2) targeting commercial and industrial customers and one (1) program available to all customers.

The 2009 Stipulation set forth the Company's original DSM/EE mechanism and methodology for recovery of prudently incurred DSM/EE program costs, net lost revenues, and a program performance incentive ("PPI") equal to 8% of the net savings for DSM programs and 13% of net savings for EE programs (the "Original Mechanism"). DSM/EE costs were to be amortized over a period not to exceed ten (10) years; net lost revenues were not amortized and were recovered only for the first thirty-six (36) months after the installation of a measure; and the PPI was amortized using a ten (10) year amortization period. Net lost revenues and the PPI were to be trued-up following the completion and review of a program's impact evaluation. Large commercial customers using more than 1 million kWh annually and all industrial customers were eligible to opt out of DEP's DSM/EE programs. Customers that opted out received a DSM/EE credit. All residential customers paid the residential DSM/EE Rider rate. Since the initial cost recovery filing, five (5) additional annual cost recovery applications were approved under the Original Mechanism in Docket Nos. 2010-161-E, 2011-181-E, 2012-93-E, 2013-76-E, and 2014-89-E.

Order No. 2015-596 in Docket No. 2015-163-E approved a new cost recovery and incentive mechanism for DSM/EE programs (the "Revised Mechanism"), to be effective January 1, 2016. Under the Revised Mechanism, DSM/EE costs are to be amortized over a period not to exceed three (3) years, rather than the ten (10) year period used under the Original Mechanism. As in the Original Mechanism, the Company earns a return on unamortized balances at the most recently approved net-of-tax rate of return. Under the Revised Mechanism, net lost revenues are reduced by "Net Found Revenues," which are any increases in revenues resulting from any new activity by DEP that causes a net increase in any customer's demand or energy consumption. The order includes a "Decision Tree" to assist in determining which activities may produce Net Found Revenues. As in the Original Mechanism, net lost revenues are not amortized and are recovered only for the first thirty-six (36) months after the installation of a measure. The

Revised Mechanism modifies the PPI to 11.75% of the net savings of the entire DSM/EE portfolio, excluding any low-income programs, education programs, and research and development activities not directly associated with a DSM/EE program. As is the case with DSM/EE costs, the PPI will be amortized over a three (3) year period. The Company is also eligible, under the Revised Mechanism, to receive a $75,000 bonus should it achieve incremental energy savings equal to one percent (1%) of the prior year's retail electricity sales during the five (5)-year period 2015 through 2019. The Company filed the first Application under the Revised Mechanism on September 1, 2015 – the Application for approval of Rider 7 which, with certain modifications, became effective January 1, 2016.

By August 1st of 2016, 2017, 2018, 2019, and 2020, the Company filed Applications for approval of updated DSM/EE Riders. ORS, in accordance with the terms of the approved settlement agreement and Commission Order No. 2015-596, conducted a review of DEP's filings and approved the Company's filings with certain adjustments.

On January 15, 2021 Commission Order No. 2021-33 in Docket No. 2015-163-E approved a new cost recovery and incentive mechanism for DSM/EE programs (the "Revised Mechanism"), to be effective January 1, 2022. As part of the Settlement agreement, the 2021 DSM/EE cost recovery filing ("Rider Filing") will reflect the revisions to the Mechanism such that the projection of Vintage Year 2022 will reflect the updated Mechanism. Likewise, any new EE and DSM programs or proposed modifications to existing programs filed on or after January 1, 2021 will comport with the updated Mechanism such that any cost effectiveness screening or cost recovery in 2022 will reflect the updated Mechanism.

On July 30, 2021, the Company filed an application for approval of Rider 13 to become effective January 1, 2022. ORS, in accordance with the terms approved in Commission Order No. 2015-596, conducted a review of DEP's filing. ORS's review includes an evaluation of the three (3) major cost components associated with the Company's DSM/EE programs, -- Program Costs, Net Lost Revenues and PPI. ORS audited the Company's costs for the period of January 1, 2020 through December 31, 2020 ("Test Period"). ORS also reviewed the Company's cost estimates for the period of January 1, 2022 through December 31, 2022 ("Rate Period").

DSM/EE Programs

The Company's filing includes a request for cost recovery encompassing twenty-two (22) DSM/EE programs. The programs and the launch dates of each program are shown in Table 2 below.

Table 2: Program Year Timeline

Residential Programs	
Residential Home Advantage Program	01/01/2009
Residential Load Control Program (EnergyWise™)	04/01/2009
Energy Efficient Benchmarking / My Home Energy Report	05/06/2009
Solar Water Heating Pilot	06/01/2009
Residential Smart $aver	07/01/2009
Residential Low Income – Neighborhood Energy Saver	10/01/2009
Residential Lighting	01/01/2010
Appliance Recycling	04/15/2010
Residential New Construction	01/01/2012
Multi Family Energy Efficiency	06/01/2014
Energy Education Program	06/01/2014
Save Energy and Water Kit	11/01/2015
Residential Assessments	03/09/2016
Commercial and Industrial Programs	
CIG Energy Efficiency	05/01/2009
Nonresidential Smart $aver	06/03/2009
CIG Demand Response Automation	05/01/2011
Small Business Energy Saver	11/01/2011
General Service Lighting	04/01/2013
Business Energy Report	12/30/2015
EnergyWise for Business	01/04/2016
Nonresidential Smart $aver Performance Incentive	01/01/2017
Programs for All Customers	
Distribution System Demand Response ("DSDR")	04/01/2008

- The Residential Home Advantage Program was terminated March 31, 2013 because of higher building standards and Energy Star standards that went into effect in 2013, making the program no longer cost effective. The program was replaced by the Residential New Construction Program. Due to the amortization period in effect when these program costs were incurred, remaining unamortized program costs are included in Rider 13.

- The Solar Water Heating pilot is no longer active. Due to the amortization period in effect when program costs were incurred, remaining unamortized costs are included in Rider 13.

- The Company's implementation vendor for the Appliance Recycling Program went into receivership and discontinued operations on November 19, 2015. Although the Company continues to evaluate options with other vendors that offer appliance recycling, the Company has found that increased costs and required limitations on the program negatively impact the program's viability. The Company does not currently plan to revive this program.

- The Business Energy Report provides a comparative usage report that compares a customer's energy use to their peer groups along with actionable ideas to help them become more energy efficient. The program was launched as a pilot on December 30, 2015, and initial reports were distributed to participants in February 2016. However, after an internal analysis of energy savings and future viability concerns regarding the vendor administering the pilot, the Company terminated the pilot effective August 31, 2017.

- The DSDR Program is not a typical DSM/EE program. It is a system of electric equipment and operating controls designed to enable the Company to reduce peak demand using the distribution system to reduce generation requirements. Included in the system are new line voltage regulators, additional phase wires, the relocation and addition of line capacitors, modifications of tap line configurations, sensors and intelligent controls on equipment and substations, the enhancement of information technology systems, and a new two-way communications system.

- The Company does not earn PPI for the DSDR Program, the Residential Low-Income Program, the Residential Solar Hot Water Pilot, or the Energy Education Program. In addition, under the Original Mechanism, the Company excludes from the PPI computation any programs that do not achieve a Utility Cost Test ("UCT") result of 1.0 or higher. Under the Revised Mechanism the entire portfolio of programs receives a uniform PPI if the portfolio as a whole passes the UCT, which was the case in this docket.

- The 2013 vintages of the Residential Home Advantage, Residential Home Energy Improvement, Residential New Construction, and Small Business Direct Install programs did not meet the UCT threshold and were thus excluded from the PPI computation. In addition, the 2014 vintage of the Residential Home Energy Improvement Program was excluded from the PPI computations on the same basis. For 2016, 2017, 2018 and 2019, even though the Residential Home Energy Improvement Program again failed the UCT, under the Revised Mechanism the entire portfolio of programs receives a uniform PPI if the portfolio as a whole passes the UCT, which was the case. The Non-Residential Performance Incentive Program also failed the UCT for 2019.

- One (1) program – the EnergyWise for Business program, is projected to fail the UCT for 2022. This means that this program is not projected to be cost effective. The EnergyWise for Business program was moved to a "maintenance mode" in 2021, in that no new customers will be added to this program until cost effectiveness can be attained.

Based on information provided by the Company, the programs appear to be performing well overall. The Company found that, excluding the impact of the DSDR Program, the portfolio achieved 97% of forecasted 2020 energy savings and exceeded the forecasted peak demand reduction by 6% in 2020. The DSDR Program provided an additional system energy savings of 32,097,809 kWh and peak demand savings of 205,053 kW in 2020.

Table 3 below shows DSM/EE Program Energy Savings, Incentive Program Costs and Non-Incentive Program Costs for Vintage years 2017 - 2020.

Table 3: DSM/EE Energy Savings, Incentive Program Costs, and Non-Incentive Program Costs

Vintage Program Years	Net MWh Savings	Incentive Program Costs	Non-Incentive Program Costs
2017	413,781	$60,629,857	$3,202,406
2018	446,913	$52,401,164	$4,228,530
2019	409,303	$52,678,590	$4,471,879
2020	354,962	$47,796,125	$5,791,707

Chart 1 below shows a graphical representation of the DSM/EE Program energy savings and the associated Incentive Program Costs for Vintage years 2017 – 2020.

Chart 1: DSM/EE Energy Savings and Incentive Program Costs for Vintage Years 2017 - 2020

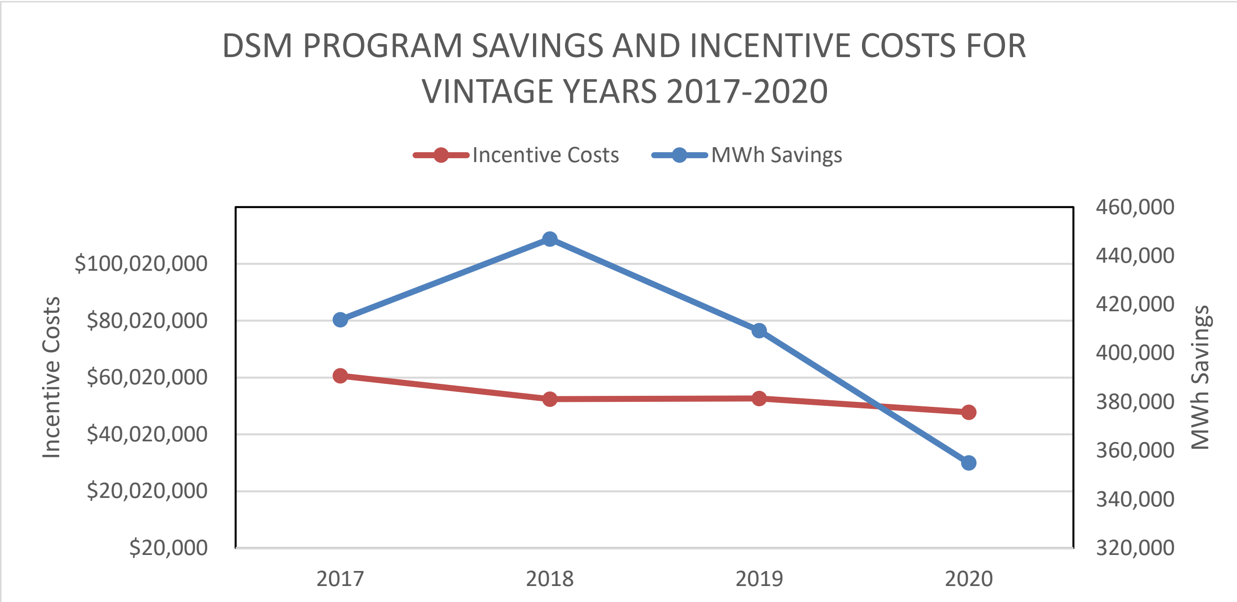
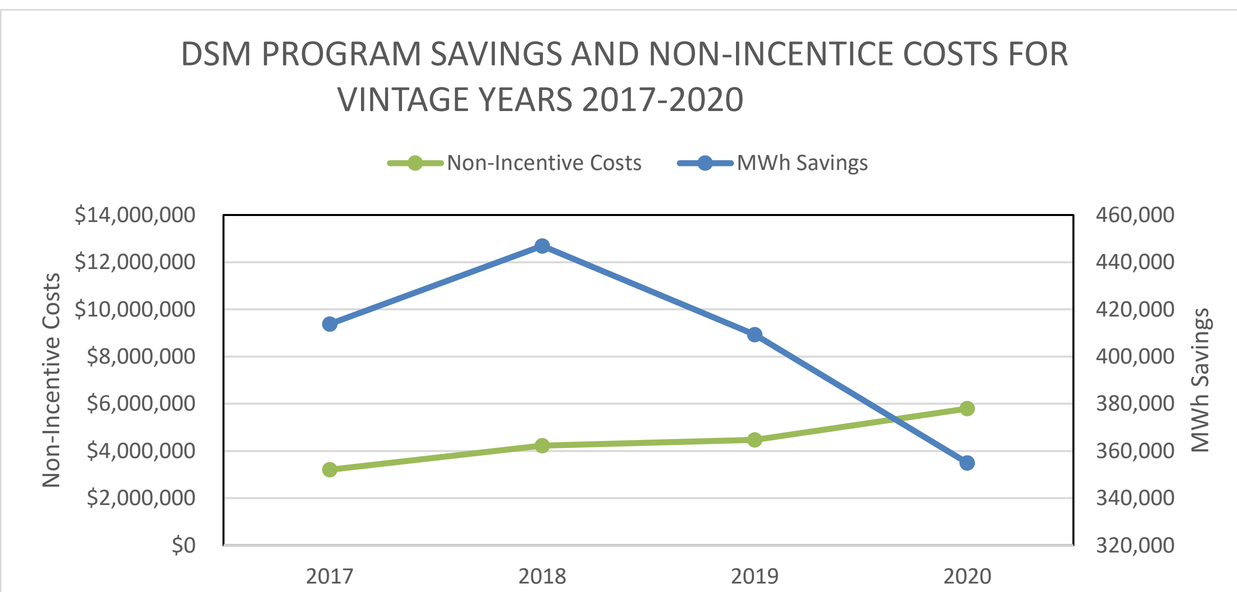


Chart 2 below shows a graphical representation of the DSM/EE Program energy savings and the associated Non-Incentive Program Costs for Vintage years 2017 – 2020.

Chart 2: DSM/EE Energy Savings and Non-Incentive Program Costs for Vintage Years 2017 - 2020

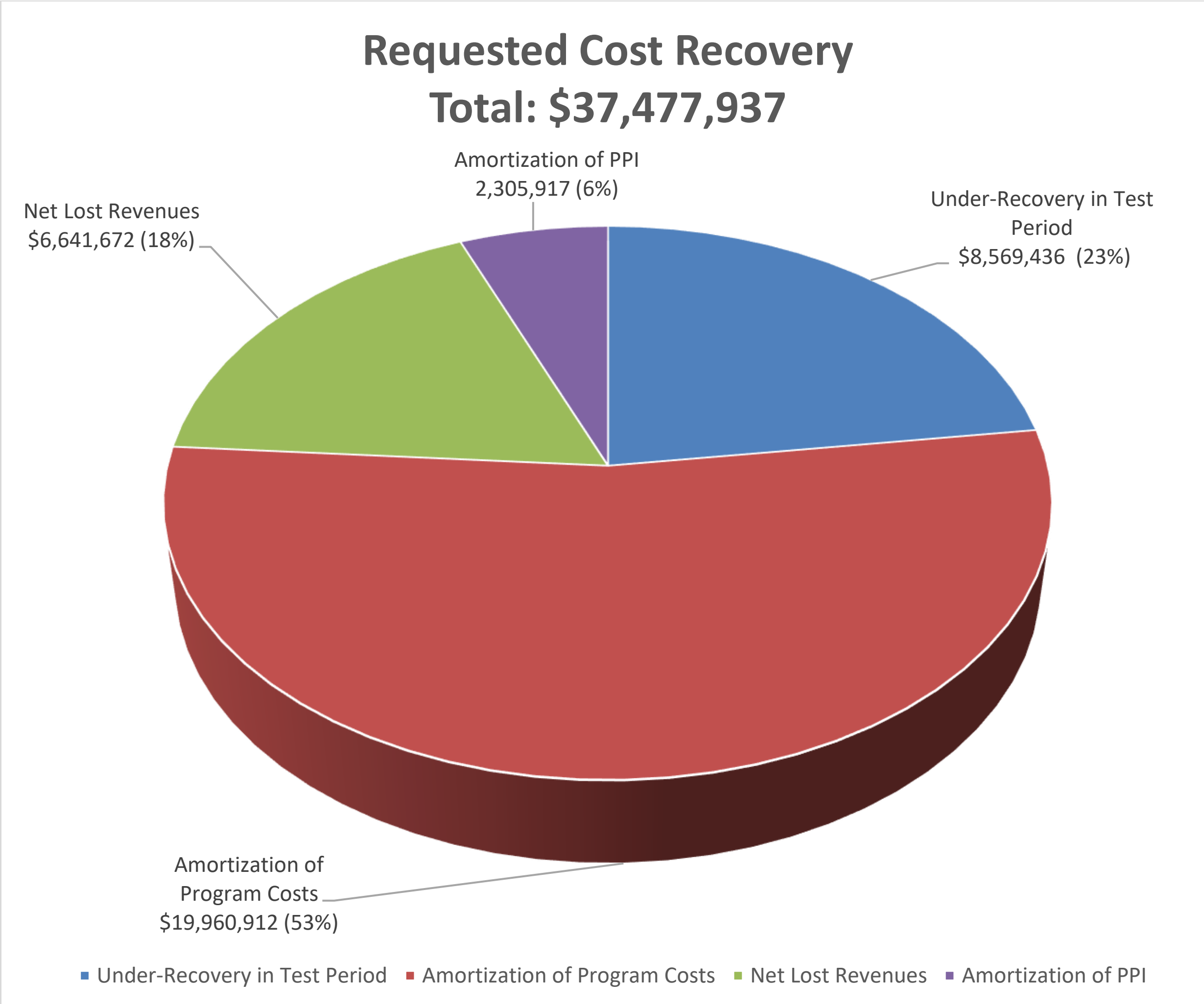


Program Cost Evaluation

The Company's Revised Mechanism allows DEP to amortize certain costs over three (3) years. The total amortized cost for DEP's filing is $37,477,937. This is the dollar amount the Company is seeking to recover in this docket. For this requested amount, the Company projects energy savings of 462,357,732 kWh in 2022, which equates to 8.1 ¢/kWh saved in 2022. Assuming an average five (5)-year life for the measures installed, the lifetime costs average 1.6 ¢/kWh saved.

The total amortized cost of $37,477,937 is comprised of program costs, net lost revenues, PPI, over/under collections during the Test Period, and rate adjustments. The Company's Revised Mechanism allows DEP to amortize Program Costs and PPI, with carrying costs, over three (3) years. Program costs reflect a request of $19,960,912, or 53% of the total amortized cost. PPI, which is associated with savings resulting from the implementation of DSM/EE programs, reflects a request of $2,305,918, or 6% of the total amortized cost. The Company is requesting recovery for net lost revenues of $6,641,672, or 18% of the total amortized amount, and a cost of $8,569,436, or 23% of the total amortized cost to account for an under-recovery of actual program costs during the Test Period. DEP does not amortize its net lost revenues, any (over)/under recoveries from prior periods or the rate adjustments, as they are fully recovered during the Rate Period. The breakdown of the requested cost recovery is shown in Chart 3 below.

Chart 3: Rider 13 Revenue Requirements



A breakdown of the major cost components of this filing and the development of the billing factors is shown in Exhibit 1 of this report. The requested revenues from residential customers are recovered from all residential ratepayers, while the non-residential revenues are recovered solely from those non-residential ratepayers that do not opt-out of the programs.

Advisory Group

The DEP Collaborative Group ("Carolinas Collaborative"), the Company's advisory group concerning DSM/EE matters, meets every other month to discuss the status of each program, including preliminary participation statistics, evaluation, measurement and verification ("EM&V") plans and preliminary EM&V data. The Carolinas Collaborative consists of members from both North Carolina and South Carolina representing all customer classes and a variety of governmental, environmental, and commercial interests. The Carolinas Collaborative met on January 10, 2020, March 19, 2020, May 15, 2020, July 23, 2020, September 30, 2020, and November 5, 2020. During the meetings, the Company shared regulatory and program updates along with program challenges resulting from the COVID-19 pandemic, target audience strategies that are employed to make the DSM/EE programs successful and provided an opportunity for members to participate in discussions on how these modifications may impact participation among the various sectors.

In addition, the Company shared results from the Market Potential Study that showed the achievable EE and DSM program potential savings, the drivers behind the achievable potential savings, the cost-benefit results (cumulative through 2024), and potential participation rates to achieve the potential savings. The results of the study will inform energy efficiency saving potential and Demand Response forecast.

EVALUATION, MEASUREMENT & VERIFICATION

The Company received the following EM&V Reports for the 2018, 2019 and 2020 vintages of DEP's programs:

- Summer PY2019 EM&V Report for the EnergyWise Home Demand Response Program
- 2020 EM&V Report for the Duke Energy Multifamily Energy Efficiency Program
- 2018-2019 Save Energy and Water Kits Evaluation Report
- 2020 Non-Residential Smart Saver Prescriptive Program Evaluation Report
- 2020 EM&V Interim Report for the EnergyWise Business Program

These EM&V Reports were used by the Company to true-up the 2018, 2019 and 2020 vintages of these programs in this filing.

ESTIMATES USED IN THE FILING

For the most part, the programs' avoided energy amounts, avoided capacity amounts, net lost revenues, and PPI amounts are estimates that were developed using the DSMore model and the Company's most recent planning data. Thus, nearly all the dollar amounts in the filing, with the exception of the Test Period program costs and the trued-up vintages of certain programs, are estimates. The estimated values and dollar amounts are to be trued-up in future filings, based on EM&V results. ORS is familiar with the DSMore model and finds it to be a reasonable tool for this purpose.

FORECASTED RETAIL SALES

For the computation of rates for this filing, the Company has utilized the spring 2021 forecast of retail sales. ORS is familiar with the methodology used to generate the sales forecast and finds it to be a reasonable approach to establish rates.

ENERGY AND PEAK DEMAND SAVINGS

The Company projects that by the end of 2022 the DSM/EE programs will have reduced annual electric usage by a cumulative 3,793,380 megawatt-hours and will have the capability to reduce the annual one-hour peak usage by 415 megawatts. These are considerable savings and may provide DEP the ability to avoid or defer the construction of additional generating facilities.

OPT-OUTS

In its 2020 filing, the Company reported that 216 industrial and commercial customers – representing 64.3% of DEP's industrial and commercial load opted out of the Company's DSM/EE programs. In this filing, the Company reports that, as of December 31, 2020, 174 industrial and commercial customers representing 61.4% of DEP's industrial and commercial load have chosen to opt-out of its DSM/EE programs.

RATE IMPACT

The approved rates for DSM/EE Rider 12 and the Company's requested rates for Rider 13 are shown below in Table 4.

Table 4: Comparison of Current and Requested Rates

DSM/EE Rider	Approved Rider 12 (¢/kWh)	Requested Rider 13 (¢/kWh)	Difference (¢/kWh)	Percentage Change (%)
Residential	0.647	0.829	0.182	28%
General Service	1.007	1.127	0.120	12%

The increases in the Rider 13 rates are primarily due to the recovery of under-recoveries of actual costs that were incurred in previous years (true-ups).

CONCLUSION

ORS is encouraged by the overall cumulative energy savings the programs continue to achieve. However, the EnergyWise for Business program continues to struggle with cost-effectiveness. ORS recommends that the company continue to incorporate the necessary changes to improve the program's cost effectiveness.

ORS finds that the updated Rider 13 was developed in accordance with the terms and conditions set forth by the Commission and is based on reasonable estimates of participation in the Company's DSM/EE programs. ORS recommends the approval of the following Rider 13 rates as illustrated below in Table 5.

Table 5: Rate Recommendations

DSM/EE Rider	Requested Rider 13 (¢/kWh)	Difference (¢/kWh)	Percentage Change (%)
Residential	0.829	0.182	28%
General Service	1.127	0.120	12%

If approved, the change in Rider 13 for an average residential customer using 1,000 kWh per month will increase the customer's monthly bill by approximately $1.82. The Company is requesting the updated rates associated with Rider 13 be effective for bills rendered on and after January 1, 2022.

Exhibit 1

DEP Revenue Request for DSM/EE Programs
For the Rate Period of January 1, 2022 - December 31, 2022
Docket No. 2021-243-E

	Residential		General Service		Total of EE and DSM Portions		Combined Total
	EE Portion	DSM Portion	EE Portion	DSM Portion	EE Portion	DSM Portion	DSM/EE Total
Rate Period Unamortized Program Costs:							
Estimated Rate Period Program Costs excluding DSDR	$6,320,405	$1,609,466	$4,033,153	$646,662	$10,353,558	$2,256,128	$12,609,686
Estimated Rate Period Program Costs for DSDR	$0	$2,877,686	$0	$1,472,219	$0	$4,349,905	$4,349,905
Total Estimated Rate Period Program Costs	$6,320,405	$4,487,152	$4,033,153	$2,118,881	$10,353,558	$6,606,033	$16,959,591
Program Cost Revenue Requirement for Rate Period							
Amortized Estimated Rate Period Program Costs excluding DSDR	$2,721,312	$536,489	$1,344,384	$215,554	$4,065,696	$752,043	$4,817,739
Estimated Rate Period Program Costs for DSDR	$0	$2,877,686	$0	$1,472,219	$0	$4,349,905	$4,349,905
Prior Period Amortization	$3,884,315	$1,772,202	$2,517,379	$448,149	$6,401,694	$2,220,351	$8,622,045
A&G and Carrying Costs	$1,016,403	$423,819	$594,207	$136,794	$1,610,610	$560,613	$2,171,223
Rate Period Program Cost Revenue Requirement	$7,622,030	$5,610,196	$4,455,970	$2,272,716	$12,078,000	$7,882,912	$19,960,912
Total Revenue Requirement							
Test Period (Over)/Under Recovery as of December 31, 2019	$2,781,524	($650,467)	$4,494,849	$1,943,530	$7,276,373	$1,293,063	$8,569,436
Rate Period Program Cost Revenue Requirement	$7,622,030	$5,610,196	$4,455,970	$2,272,716	$12,078,000	$7,882,912	$19,960,912
Net Lost Revenues	$3,172,068	$0	$3,465,487	$4,117	$6,637,555	$4,117	$6,641,672
Amortization of PPI	$833,599	$244,960	$1,213,531	$13,828	$2,047,130	$258,788	$2,305,918
Total Revenue Requirement	$14,409,221	$5,204,689	$13,629,837	$4,234,190	$28,039,058	$9,438,880	$37,477,937
Gross Receipts Taxes, Regulatory Fees and RECD Adjustment	$244,434	$0	$70,709	$22,019	$315,143	$22,019	$337,162
Total Revenue Requirement with Gross Receipts, Reg Fees and RECD	$14,653,655	$5,204,689	$13,700,546	$4,256,209	$28,354,201	$9,460,899	$37,815,099
DSM/EE Rate Rider 13							
Total Revenue Requirement with Gross Receipts, Reg Fees and RECD Adj	$14,653,655	$5,204,689	$13,700,546	$4,256,209			
South Carolina Rate Class KWh Sales	2,396,413,041	2,396,413,041	1,596,131,349	1,584,136,299			
Rate Riders (Cents/kWh)	0.611483	0.217187	0.858360	0.268677			

	Residential	General Service		
		EE Portion	DSM Portion	Total
DSM/EE Rider 12 (Cents/kWh)	**0.829**	**0.858**	**0.269**	**1.127**